



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/825,641

04/15/2004

Kevin Scott Smith

UNCC 02-020

9020

44231

7590

06/15/2006

KILPATRICK STOCKTON LLP - 46872

J. STEVEN GARDNER

1001 WEST FOURTH STREET

WINSTON-SALEM, NC 27101

EXAMINER

GATES, ERIC ANDREW

ART UNIT

PAPER NUMBER

3722

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/825,641	Applicant(s) SMITH ET AL.	
	Examiner Eric A. Gates	Art Unit 3722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7,9-11,13,14 and 16-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7,9-11,13,14 and 16-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 24 May 2006 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-5, 7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rivin (U.S. Patent 5,322,304).

4. Regarding claim 1, Rivin discloses an apparatus (see Figures 5-7) comprising: a first element 40 adapted to be coupled with a second element 48, the first element 40 comprising a structured surface 64 and the second element comprising a second surface 48, wherein the second surface 48 comprises a receiving surface 48b and

Art Unit: 3722

wherein the structured surface 64 comprises a plurality of depressions (depressions in 64 for balls 46). See also column 10, lines 4-15.

The embodiment of Figures 5-7 in Rivin does not disclose that the depressions are machined. However, the embodiment of Figures 9-11 does teach the use of depressions 50f/50g that are machined into the conical shank portion 50d of tool holder body 50 for the purpose of retaining several balls 52 in a ring shape and eliminating the need for a cover 48. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have combined the apparatus in Figures 5-7 of Rivin with the machined depressions in Figures 9-11 of Rivin in order to have depressions that are more permanent in nature than those in figures 5-7.

5. Regarding claim 3, the modified invention of Rivin discloses wherein the receiving surface 48b is substantially uniform.

6. Regarding claim 4, the modified invention of Rivin discloses wherein the structured surface 64 is adapted to be coupled with the receiving surface 48b.

7. Regarding claim 5, the modified invention of Rivin discloses wherein the structured surface 64 is engaged with the receiving surface 48b.

8. Regarding claim 7, the modified invention of Rivin discloses wherein the depressions (depressions in 64 for balls 46) are substantially hemispherical.

9. Regarding claim 9, the modified invention of Rivin discloses wherein the structured surface 64 further comprises a projection (conical tip).

Art Unit: 3722

4. Claims 11, 13-14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rivin (U.S. Patent 5,322,304).

10. Regarding claim 11, Rivin discloses an apparatus comprising (see Figures 5-7) a first element 40 adapted to be coupled with a second element 48, the first element 40 comprising a first surface 64; and means for damping 64, the damping means disposed on the first surface 64 of the first element 40, wherein the second element 48 comprises a receiving surface 48b and wherein the damping means 64 comprises a plurality of depressions (depressions in 64 for balls 46) disposed in the first surface 64.

The embodiment of Figures 5-7 in Rivin does not disclose that the depressions are machined. However, the embodiment of Figures 9-11 does teach the use of depressions 50f/50g that are machined into the conical shank portion 50d of tool holder body 50 for the purpose of retaining several balls 52 in a ring shape and eliminating the need for a cover 48. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have combined the apparatus in Figures 5-7 of Rivin with the machined depressions in Figures 9-11 of Rivin in order to have depressions that are more permanent in nature than those in figures 5-7.

11. Regarding claim 13, the modified invention of Rivin discloses wherein the first surface 64 is adapted to be coupled with the receiving surface 48b.

12. Regarding claim 14, the modified invention of Rivin discloses wherein the first surface 64 is disposed adjacent to the receiving surface 48b.

13. Regarding claim 16, the modified invention of Rivin discloses wherein the depressions (depressions in 64 for balls 46) are substantially hemispherical.

5. Claims 17-20 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rivin (U.S. Patent 5,322,304).

14. Regarding claim 17, Rivin discloses a method of damping vibrations in a first element 64 and a second element 48, wherein said method comprises: adapting a first element 64 to be coupled with a second element 48, the first element 64 comprising a structured surface 64 and the second element comprising a second surface 48b, the second surface comprising a receiving surface 48b and the structure surface comprising a plurality of depressions (depressions in 64 for balls 46).

The embodiment of Figures 5-7 in Rivin does not disclose that the depressions are machined. However, the embodiment of Figures 9-11 does teach the use of depressions 50f/50g that are machined into the conical shank portion 50d of tool holder body 50 for the purpose of retaining several balls 52 in a ring shape and eliminating the need for a cover 48. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have combined the apparatus in Figures 5-7 of Rivin with the machined depressions in Figures 9-11 of Rivin in order to have depressions that are more permanent in nature than those in figures 5-7.

15. Regarding claim 18, the modified invention of Rivin discloses wherein the depressions (depressions in 64 for balls 46) are substantially hemispherical.

16. Regarding claim 19, the modified invention of Rivin discloses wherein the first surface 64 is disposed adjacent to the receiving surface 48b.

Art Unit: 3722

17. Regarding claim 20, the modified invention of Rivin discloses wherein the first surface 64 is adapted to be coupled with the receiving surface 48b.

18. Regarding claim 22, the modified invention of Rivin discloses wherein the structured surface 64 further comprises a projection (conical tip).

19. Regarding claim 23, the modified invention of Rivin discloses wherein the structured surface 64 is engaged with the receiving surface 48b.

20. Claims 10 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rivin in view of Slocum et al. (U.S. Patent 6,280,126).

21. Regarding claims 10 and 21, the modified invention of Rivin discloses the invention substantially as claimed, except Rivin does not disclose wherein a viscous fluid is disposed on the structured surface.

22. Slocum et al. teaches the use of a viscous fluid (see Column 3, lines 63-65) on a structured surface 23 for the purpose of providing additional damping. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to have combined the structured surface of Rivin with the viscous fluid of Slocum et al. in order to provide additional damping to the elements.

23. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rivin.

24. Regarding claims 24 and 25, the modified invention of Rivin discloses the invention substantially as claimed, except Rivin does not disclose wherein the

Art Unit: 3722

depressions are arranged in a non-uniform pattern. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have placed the depressions in a non-uniform pattern instead of equally spaced for the purpose of design choice, since it has been held that rearranging parts of an invention involves only routine skill in the art, and Applicant states in the instant specification on page 7, paragraph 31, that the depressions may be arranged in either a non-uniform or a uniform pattern.

Response to Arguments

25. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

26. For the reasons as set forth above, the rejections are maintained.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric A. Gates whose telephone number is 571-272-5498. The examiner can normally be reached on Monday-Thursday 7:45-6:15.

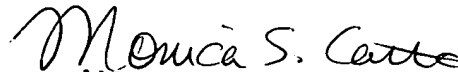
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica Carter can be reached on 571-272-4475. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3722

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



EAG
9 June 2006


MONICA CARTER
SUPERVISORY PATENT EXAMINER